

REMARKS/ARGUMENTS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Claim 1-16 remain pending.

At the outset, it is respectfully submitted that the finality of the Examiner's Official Action was premature. In this regard, it is respectfully noted that original claims 1-16 were rejected in the Examiner's first Official Action over Ito in view of Inoguchi. The Examiner has now newly rejected claims 1-16 over Inoguchi in view of Ito. It is respectfully submitted that the Examiner's change of primary reference materially changes the Examiner's grounds for rejection so that the Action should not have been made final. It is further respectfully noted that because the amendments to the original claims made by the March 1, 2005 amendment were directed to matters of form and clarity and were not made to distinguish from the prior art, the Examiner's new rejection was not necessitated by applicant's amendment. In any event, it is respectfully submitted that the claims presented are not anticipated by nor obvious from the combination of Inoguchi and Ito for the reasons advanced hereinbelow. In the event the Examiner withdraws the rejection based on Inoguchi and Ito in whole or in part and makes a new rejection of the claims, it is respectfully submitted that any such new rejection would have to be presented in a non-final Office Action as not necessitated by any amendment presented by applicant.

Claims 1-16 remain pending. Claim 17 was withdrawn from consideration by the examiner as directed to a non-elected invention. To advance prosecution, claim 17 has been canceled above without prejudice. Applicant reserves the right to pursue unclaimed subject matter in continuation and/or divisional application(s).

Claims 1-16 have been rejected under 35 USC 103 as being unpatentable over Inoguchi in view of Ito. Applicant respectfully traverses this rejection.

One aspect of the applicant's claimed invention, as set forth in independent claim 1, is that the extrusion screw has a large diameter downstream portion so as to facilitate extrusion of ceramic moldings having larger diameters. As explained in the specification, prior approaches have restricted the maximum diameter of ceramic moldings so that in order to extrude a large diameter molding, it has in the past been necessary to use a large extruding apparatus provided with a large diameter extrusion screw. In one aspect of the applicant's invention, a smaller overall extrusion apparatus is employed with only a final "diffusion" portion of the extrusion screw having a relatively large diameter. The earlier "pressure" portion of the extrusion screw has a relatively small diameter.

Inoguchi discloses a production method for ceramic structures utilizing an apparatus having first and second laterally spaced screws, each screw having a substantially constant screw diameter and respective screw thread pitch. Although there is no discussion of the screws 15, 35, as depicted, they each have a constant, uniform screw diameter. Inoguchi discloses that his invention aims at providing a production method for a ceramic structure capable of increasing the extrusion rate coefficient. In the Inoguchi invention, a water-insoluble liquid lubricant consisting of, e.g., acyl glycerin as the main component is added to the ceramic batch material. This makes the resistance to the extrusion of the ceramic batch material smaller and the extrusion rate coefficient greater than if a water-soluble lubricant is added.

Thus, as recognized and acknowledged by the Examiner, Inoguchi does not teach or suggest a downstream end diffusion screw part having a diameter larger than that of a pressure screw part of the extrusion screw.

The Examiner seeks to overcome the deficiencies of Inoguchi with respect to applicant's claims by relying upon the secondary reference to Ito.

First, it is respectfully noted that Ito is directed towards a special kind of extruder for making plexifilamentary fiber out of high density polyethylene (HDPE).

The Examiner has acknowledged that Ito's extruder is shown as used for making plexifilamentary fiber but the Examiner summarily concludes that this "does not mean that it could not be capable of handling ceramic materials. Materials worked upon in an apparatus are viewed as a recitation of intended use and bear no weight to the structural limitation of the apparatus." The Examiner's comment might be relevant if the Examiner was rejecting applicant's claims as anticipated by the Ito structure. However, in the present case, the Examiner has asserted that one of ordinary skill in the art would have found it "obvious" to modify the Inoguchi structure in view of the Ito structure.

Ito describes his screw structure as provided to mix and dissolve a polymer and solvent to make a polymer solution. Ito's extruder feeds input materials through ports 17 and 18 before forcing it through exit opening 20 into a downstream fiber spinning apparatus. Note in this regard that Ito discloses that his screw assembly supplies a polymer to a dissolving area in a state such that the polymer is melted by a heated screw extruder, supplying a solvent into the melted polymer, mixing and dissolving the polymer and the solvent to make a polymer solution, and extruding the polymer solution into a low pressure area. Thus, the entire structure, function, purpose and materials of Ito is remarkably different from the ceramic structure production method and apparatus of Inoguchi. The skilled artisan considering Inoguchi and Ito would see no use or advantage for Ito's disclosed heated screw extruder in connection with ceramic molding and would never find it obvious to incorporate the same in Inoguchi.

Thus, Applicant respectfully submits that when considering whether one skilled in the art would modify one structure in view of another, the materials worked upon and the intended use of the respective structures would certainly be highly relevant. In this case, neither Ito nor the remaining art of record suggests that the Ito screw would be of any use or advantage for the production of a ceramic structure, and would not "obviously" adopt that screw in the Inoguchi assembly.

As the CAFC has said, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. ACS Hospital Systems v Montefiore Hospital, 221 USPQ 929, 933 (Fed. Cir. 1984). There must be a suggestion in the art relied upon to use what one reference discloses in or in combination with the disclosure of the other reference or references relied upon by the Examiner. In re Grabiak, 226 USPQ 870, 872 (Fed. Cir. 1986).

Section 103 does not allow the Examiner to engage in picking and choosing from the prior art only to the extent that it will support a holding of obviousness, while excluding parts of the prior art essential to the full appreciation of what the prior art suggests to one of ordinary skill in the art. In re Wesslau, 147 USPQ 391 (CCPA 1975).

Because of the very different materials processed by the Inoguchi and Ito structures, and the substantial differences between their respective structures, it is respectfully submitted that the skilled artisan would not obviously modify Inoguchi to incorporate the Ito screw and, therefore, the Examiner has not established a prima facie case of obviousness under 35 USC 103.

It is further respectfully submitted that even if the Ito screw were incorporated in the Inoguchi assembly, the combination claimed would still not be anticipated nor obvious. In this regard, and with reference to the annotated Figure 6 of Ito attached hereto, Ito does not show an apparatus wherein a diffusion screw part has a screw

diameter larger than that of the pressure screw part. More specifically, the attached illustration shows two areas respectively corresponding to a diffusion (metering) screw part and a pressure (compressing) screw part. As clearly understood from the Ito illustration, the diffusion screw part and the pressure screw part are axially spaced from one another and have substantially the same maximum diameter. In this connection, reference numeral 13 indicates a compressing zone, reference numeral 18 indicates a feed opening for a solvent, a diffusion area 16 being located downstream of the feed opening for a solvent, and reference numeral 15 indicating a mixing and dissolving zone. The region at 15 does not constitute a pressing portion because the gap between the screw and the housing is such that this does not constitute a pressure portion but rather an area where the solvent is added and mixed to dissolve the polymer and the solvent to make a polymer solution. Thus, even if the Ito screw were adopted in Inoguchi, because the pressing part has a diameter that is substantially the same as the diffusion part, applicant's claimed structure would still not be anticipated nor obvious.

In view of the foregoing, it is respectfully submitted that Inoguchi and Ito cannot properly be combined and even if those structures were combined, the invention claimed would still not be anticipated nor obvious.

Claims 1-16 were also rejection under the judicially created doctrine of double patenting over "the specification and claims 1-13" of USP 6,790,025. Applicant respectfully traverses this rejection.

In this regard the Examiner asserts that the subject matter claimed in the present application is fully disclosed in the '025 patent and is allegedly covered by the '025 patent because the designs of both systems are "very similar with respect to the drawings in the specification" and because the '025 patent "appears to anticipate the

language claimed in" the subject application. Applicant respectfully but strongly disagrees.

The '025 patent does not teach or suggest a diffusion screw part having a screw diameter larger than that of a pressure screw part. Although this point was made in the March 1, 2005 response, the Examiner has yet to identify any Figure or passage of the '025 patent allegedly disclosing this unique and advantageous feature of the invention. Thus, irrespective of any perceived similarity between the '025 patent and the present application, the '025 patent does not "anticipate the language claimed in" the present application and there is no basis for the Examiner's rejection under the judicially created doctrine of double patenting. Likewise, in response to the Examiner's assertion that "there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into" the '025 patent, it is respectfully noted that the reason why applicant was prevented from doing so was that the '025 patent does not disclose or in any way teach or suggest a diffusion screw part having a diameter larger than that of the pressure screw part, in the combination claimed in applicant's claim 1. In view of the forgoing, the Examiner's double patenting rejection cannot properly be maintained. Reconsideration and withdrawal of rejection is therefore requested.

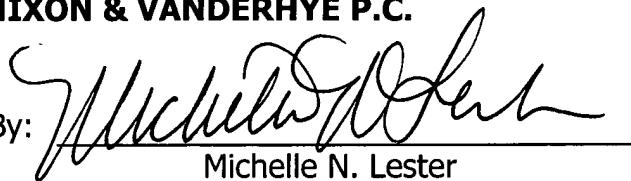
All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and an early Notice to that effect is earnestly solicited.

YAMAGUCHI et al
Appl. No. 10/669,599
July 13, 2005

Respectfully submitted,

NIXON & VANDERHYE P.C.

By:

A handwritten signature in black ink, appearing to read "Michelle N. Lester", written over a horizontal line.

Michelle N. Lester

Reg. No. 32,331

MNL:slj
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

For illustration Only

U.S. Patent

Mar. 4, 1997

Sheet 4 of 14

5,607,636

Fig. 5

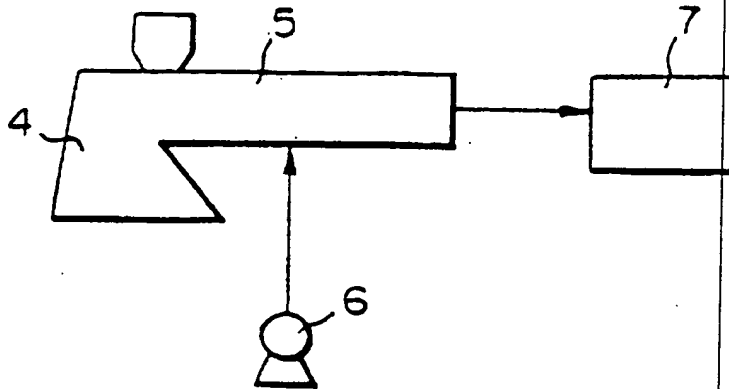
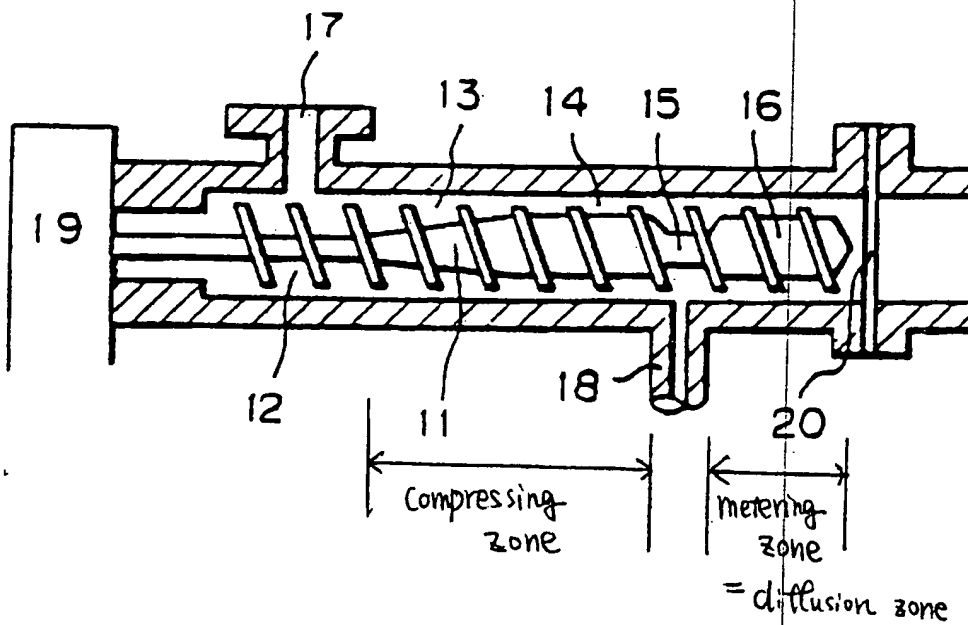


Fig. 6



11/4/04 EPR 1.1 5-54

BEST AVAILABLE COPY